

# Oracle® Life Sciences InForm

## Configuration Guide for InForm Adapter



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# Preface

This preface contains the following sections:

- [Audience](#)  
This guide is for IT administrators and others who are responsible for integrating the Oracle InForm software with other applications, including Oracle-provided products, third-party products, and custom client processes.
- [Documentation accessibility](#)
- [Diversity and Inclusion](#)
- [Related resources](#)
- [Access to Oracle Support](#)
- [Additional copyright information](#)

## Audience

This guide is for IT administrators and others who are responsible for integrating the Oracle InForm software with other applications, including Oracle-provided products, third-party products, and custom client processes.

## Documentation accessibility

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## Related resources

All documentation and other supporting materials are available on the [Oracle Help Center](#).

## Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through Support Cloud.

Contact our Oracle Customer Support Services team by logging requests in one of the following locations:

- English interface of Oracle Health Sciences Customer Support Portal (<https://hsgbu.custhelp.com/>)
- Japanese interface of Oracle Health Sciences Customer Support Portal (<https://hsgbu-jp.custhelp.com/>)

You can also call our 24x7 help desk. For information, visit <http://www.oracle.com/us/support/contact/health-sciences-cloud-support/index.html> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

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# 1

## About this guide

This guide provides a brief overview of the Oracle InForm Adapter software and instructions for verifying interfaces installation, requirements for non-Oracle implementations, as well as troubleshooting information.

# 2

## Overview of the InForm Adapter feature

In this chapter:

- [About the Oracle InForm Adapter feature](#)  
The Oracle InForm Adapter feature provides interfaces to web services that support the secure transfer of data between InForm studies and either Oracle products (such as the Clintrial Integration Solution (CIS) and Oracle Central Coding applications) or third-party products and custom applications.
- [How does the Oracle InForm Adapter feature work?](#)  
The Oracle InForm Adapter feature is a collection of interfaces for Oracle applications, other client processes, or third-party products, that require data exchange with, or updates from, Oracle InForm studies.
- [About Oracle InForm Adapter security](#)  
Security depends on the Oracle InForm Adapter interfaces and the Oracle applications used.

### About the Oracle InForm Adapter feature

The Oracle InForm Adapter feature provides interfaces to web services that support the secure transfer of data between InForm studies and either Oracle products (such as the Clintrial Integration Solution (CIS) and Oracle Central Coding applications) or third-party products and custom applications.

Each application that can accept queries or updates to its data and metadata from Oracle InForm studies requires a specific set of interfaces.

Like application programming interfaces (APIs), the Oracle InForm Adapter interfaces use published web services interfaces to allow programmatic access to applications. This allows Oracle products to be tightly integrated with third-party products and each other.




- [Oracle InForm Adapter components](#)

### Oracle InForm Adapter components

The Oracle InForm Adapter application components include:

Component	Description
Oracle InForm Server Adapter (ISA)	Provides a web service interface for all interactions between the Oracle InForm Adapter interfaces and the Oracle InForm server. This interface is not open for external integration. Interfaces that are not open for external integration cannot interact with custom client processes and third party applications. Additionally, it provides a Windows service that is used by the Transaction interface and the ODM interface.

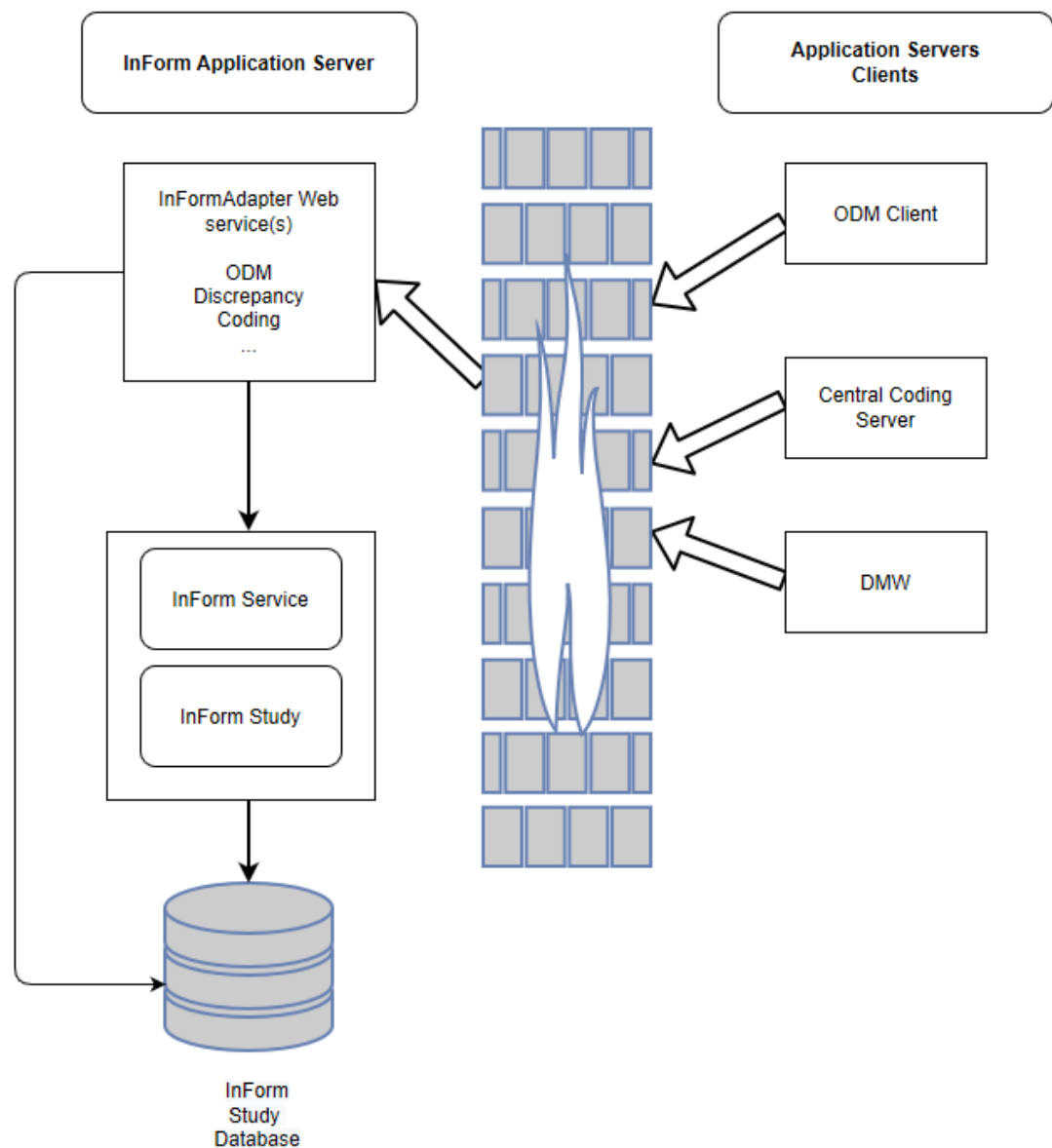


Component	Description
Administration interface	Provides access to information about the location of Oracle InForm servers and InForm studies. This interface is available only to administrators with access to the Oracle InForm server.
Central Administration interface	Provides an integration point for the central administration of Oracle applications. This interface is used by CIS to register Oracle InForm Adapter servers. For more information, see Installing Oracle InForm Adapter.
<div> <b>Note:</b> This interface is not open for external integration.</div>	
Coding interface	Provides support for the Oracle Central Coding application.
<div> <b>Note:</b> This interface is not open for external integration.</div>	
Discrepancy interface	Transmits Oracle InForm queries (discrepancies) to and from other systems or modules.
ODM Export interface	Provides access to receive Oracle InForm clinical data, admin data, and metadata in CDISC ODM standard format.
Transaction interface	Transaction sends and receives synchronization transactions between the Oracle InForm software and an external application. This interface is used by the CIS synchronization functionality that enables the transfer of data between CIS and InForm. For more information, see Installing Oracle InForm Adapter.
<div> <b>Note:</b> This interface is not open for external integration.</div>	

## How does the Oracle InForm Adapter feature work?

The Oracle InForm Adapter feature is a collection of interfaces for Oracle applications, other client processes, or third-party products, that require data exchange with, or updates from, Oracle InForm studies.

- Each integrated application or process sends requests to the appropriate Oracle InForm Adapter interface.
- The interface interacts with the Oracle InForm Server Adapter (ISA) interface on the InForm server.
- The Oracle InForm Adapter interface communicates with the Oracle InForm application server to perform the requested task through a COM interface.
- Certain interfaces interact directly with the Oracle InForm study database, as necessary, when retrieving information.



- **InForm Adapter deployment**  
You install the Oracle InForm Adapter server on the same computer as the Oracle InForm application server. Oracle recommends creating the Oracle InForm Adapter database schema in the Oracle InForm database.

## InForm Adapter deployment

You install the Oracle InForm Adapter server on the same computer as the Oracle InForm application server. Oracle recommends creating the Oracle InForm Adapter database schema in the Oracle InForm database.

## About Oracle InForm Adapter security

Security depends on the Oracle InForm Adapter interfaces and the Oracle applications used.

Security	Used with this application or interface
username/password security	<ul style="list-style-type: none"> <li>• Oracle InForm Adapter Discrepancy interface</li> <li>• Oracle InForm Adapter ODM Export interface</li> <li>• Oracle Central Coding</li> </ul>
X.509 Digital Certificate security	<ul style="list-style-type: none"> <li>• Oracle Central Coding</li> <li>• Clintrial Integration Solution (CIS)</li> <li>• Oracle InForm Adapter Discrepancy interface</li> <li>• Oracle InForm Adapter ODM Export interface</li> </ul>



### Note:

Oracle InForm Adapter validates the signature sent in request by integrations calling Oracle InForm Adapter interfaces, which in turn attempt to sign messages using the SHA 2 (SHA 256) encryption security protocol only.

- [Username/password security](#)  
Username/password authentication provides security between the interface and the Oracle InForm server. In the request for each method or operation, the SOAP header contains elements for the Oracle InForm user name and password, and the SOAP body contains an attribute for the Oracle InForm study name.
- [Security using X.509 certificates](#)  
When Oracle InForm Adapter is configured to use an X.509 certificate for authentication, it expects the SOAP messages to be signed by the associated applications using Web Services Security: SOAP Message Security Version 1.1.1 specifications.
- [Web Services Security \(WS-Security\)](#)  
The WS-Security model uses transport-level security based on TLS to protect messages.

## Username/password security

Username/password authentication provides security between the interface and the Oracle InForm server. In the request for each method or operation, the SOAP header contains elements for the Oracle InForm user name and password, and the SOAP body contains an attribute for the Oracle InForm study name.

The ODM Export interface, Coding, and Discrepancy interface use username/password authentication.

By default, the Discrepancy interface and ODM Export interface are installed with username/password authentication enabled.

For more information about ODM Export interface methods, see the *Interfaces Guide*.

## Security using X.509 certificates

When Oracle InForm Adapter is configured to use an X.509 certificate for authentication, it expects the SOAP messages to be signed by the associated applications using Web Services Security: SOAP Message Security Version 1.1.1 specifications.

To use certificate security, install and configure X.509 digital certificates for the Oracle InForm Adapter server and the associated application (for example, the Oracle Central Coding application). For more information about X.509 digital certificates configuration for Oracle applications, see *Configuring X.509 digital certificates* and the documentation for the associated applications.

## Web Services Security (WS-Security)

The WS-Security model uses transport-level security based on TLS to protect messages.

By default, WS-Security is enabled. This guide includes recommendations on integrating Oracle InForm Adapter interfaces with Oracle applications. For more information, see *Performing Oracle InForm Adapter post-installation tasks*.

To integrate custom applications and client processes with Oracle InForm Adapter interfaces that are hosted by Oracle, contact Oracle.

# 3

## Verifying the interfaces installation

### In this chapter:

- [Verifying the Discrepancy interface installation and retrieving the WSDL](#)
- [Verifying the ODM Export interface installation and retrieving the WSDL](#)

## Verifying the Discrepancy interface installation and retrieving the WSDL



### Note:

Before you verify the installation you must choose the deployment type. For more information, see [Deployment types](#).

### To verify the installation:

- Check IIS to make sure that the discrepancy virtual directory has been successfully created.
- If you are using the Default deployment, ensure that you have configured the SSL certificate for the discrepancy virtual directory. For more information, see [Default deployment](#).
- Retrieve the WSDLs and XSDs for the Discrepancy interface. This procedure can be used to determine connectivity, especially when the discrepancy service is hosted behind an F5 load balancer.

### To enable and disable the service metadata:

To display the WSDL and XSD, you must enable the service metadata.



### Note:

Only set this option to True (enable the service metadata) for debugging or testing purposes. To implement best security practices, set this option to False (disable the service metadata).

1. To enable the service metadata, set the value of **serviceMetadata httpGetEnabled** in the `web.config` file to **true**:

```
<serviceMetadata httpGetEnabled="true" httpsGetEnabled="true" />.
```

2. After you retrieve the WSDL and XSD, disable the service metadata:

For more information about using this option securely, see the *Secure Configuration Guide*.

**To retrieve the WSDL:**

Use any Internet browser, such as MS Internet Explorer, to browse to the discrepancy address.

For example, to retrieve the WSDL, browse to

```
https://webexpress.domain.com/InFormAdapter/Discrepancy/  
DiscrepancyService.svc?wsdl
```

The browser displays the WSDL.

**To retrieve the XSD:**

Use the same base address you used to retrieve the WSDL, with the following substitutions:

For the Discrepancy namespace, use the suffix **?xsd=xsd0**

For example:

```
https://webexpress.domain.com/InFormAdapter/Discrepancy/  
DiscrepancyService.svc?xsd=xsd0
```

This address is found in the retrieved WSDL in import nodes with the schemaLocation attribute.

The URLs in the returned WSDL will match the external URLs sent by the client.

## Verifying the ODM Export interface installation and retrieving the WSDL

**Note:**

Before you verify the installation you must choose the deployment type. For more information, see Deployment types.

**To verify the installation:**

- Check IIS to make sure that the ODM virtual directory has been successfully created.
- If you are using the Default deployment, ensure that you have configured the SSL certificate for the ODM Export virtual directory. For more information, see Default deployment.
- Retrieve the WSDLs and XSDs for the ODM Export interface. This procedure can be used to determine connectivity.

**To enable and disable the service metadata:**

To display the WSDL and XSD, you must enable the service metadata.



**Note:**

Only set this option to True (enable the service metadata) for debugging or testing purposes. To implement best security practices, set this option to False (disable the service metadata).

1. To enable the service metadata, set the value of **serviceMetadata httpGetEnabled** in the `web.config` file to **true**:

```
<serviceMetadata httpGetEnabled="true" httpsGetEnabled="true" />.
```

2. After you retrieve the WSDL and XSD, disable the service metadata:

For more information about using this option securely, see the *Secure Configuration Guide*.

**To retrieve the WSDL:**

Use any Internet browser, such as MS Internet Explorer, to browse to the ODM address.

For example, to retrieve the WSDL, browse to

```
https://webexpress.domain.com/InFormAdapter/ODM/ODMService.svc?wsdl
```

The browser displays the WSDL.

**To retrieve the XSD:**

Use the same base address you used to retrieve the WSDL, with the following substitutions:

For the ODM namespace, use the suffix **?xsd=xsd0**

For example:

```
https://webexpress.domain.com/InFormAdapter/ODM/ODMService.svc?xsd=xsd0
```

This address is found in the retrieved WSDL in import nodes with the `schemaLocation` attribute.

The URLs in the returned WSDL will match the external URLs sent by the client.

# 4

## Additional requirements for non-Oracle implementations

### In this chapter:

- [Software requirements for development systems](#)  
If you are developing an application or client process that integrates with the Oracle InForm Adapter interfaces, make sure that the following are available on the development system:
- [System requirements for client process systems](#)  
If you are developing an application or client process that integrates with the Oracle InForm Adapter interfaces, make sure that the following are available on the client process system:

### Software requirements for development systems

If you are developing an application or client process that integrates with the Oracle InForm Adapter interfaces, make sure that the following are available on the development system:

- A method and tools for developing the application that incorporates the web methods that are available from the Oracle InForm Adapter interfaces.
- Connectivity to the Oracle InForm Adapter server for testing the integrated application or client process.

### System requirements for client process systems

If you are developing an application or client process that integrates with the Oracle InForm Adapter interfaces, make sure that the following are available on the client process system:

- Connectivity to the interface.
- Certificates that are configured to work with the interface (if you are using the certificate security model).
- Firewall security that is configured to receive output from the interface.
- A port that is configured for communication.



# 5

## Troubleshooting

In this appendix:

- [Update to PFIA\\_SINGLETONS fails](#)
- [Cannot view interface pages](#)  
What to do when you are unable to view interface pages.

### Update to PFIA\_SINGLETONS fails

**Occurs**

When you are installing the Oracle InForm Adapter software.

**Error message**

ERROR PhaseForward.InFormAdapter.IAConfigurationConsole.IAConfigurationConsole  
Update to data table informadapter.PFIA\_SINGLETONS failed.

**Possible causes**

XA transactions not enabled.

**Solution**

Enable XA transactions.

For more information, see the *Configuring the Oracle database software* chapter in the *Oracle InForm Installation Guide*.

### Cannot view interface pages

What to do when you are unable to view interface pages.

**Occurs**

When you are navigating to a web service interface page.

**Error message**

HTTP 404 Page not found.

**Possible causes**

- Oracle InForm Adapter was not installed correctly.
- By default, the WSDL and the documentation page for a web service are not accessible due to security reasons.

**Solution**

- Make sure Oracle InForm Adapter is installed correctly.
- Enable access to WSDL and metadata (for self-hosted environments only). For more information, see the *Security Guide*.